ABSTRACT

A shaft coupling apparatus used in a pump assembly for pumping molten metal. The apparatus includes an impeller shaft, a drive shaft, and first and second coupling members. The first member engages the impeller shaft and includes a tube and two diametrically opposed pins. The second member includes a sleeve having an inner diameter adequate to receive the tube, a plate fixed to the sleeve having a mating surface cooperatively aligned with a mating surface of the impeller shaft, structure defining pin receiving slots, each slot adapted for guiding a pin into a retained position extending through the slot, and structure defining a plurality of voids in a sleeve outer surface. The pins and voids are rotatably engagable by a tool set such that the impeller and motor shafts are connectable and disconnectable by manual operation of the tool set. The apparatus may form a quick disconnect/connect gas injection shaft.